

## NOTE ON SYPHILIS OF THE LIVER.

WITH A REPORT OF THREE CASES IN WHICH OPERATION WAS RESORTED TO.

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ACQUIRED syphilis of the liver in its tertiary stage assumes three distinct microscopical types: First, when the eruption shows itself in the form of white milky patches, irregular star-shaped in form, due to an inflammation of the Glisson's capsule as first pointed out by Virchow. Second, single gumma, frequently large and usually on the anterior surface or along the anterior border of the liver. Third, multiple gummata which appears to be the more frequent form, varying in size from a small bird-shot to an English walnut.

As Rolliston says, "The right lobe is much more often affected, and the anterior surface far more frequently than the under aspect. In eighty-six cases of hepatic gummata collected by J. L. Allen, only eleven were single. It is said that the neighborhood of the falciform ligament is a favorable situation for gummata." But Rolliston has not noticed any such tendency except for the anterior surface.

The gross appearance of old gumma presents raised tumors irregularly nodular with three concentric zones,—the centre yellow and softened; the middle one whiter, more resisting, and elastic; the third or exterior, a fibrous shell.

The first form is perhaps the early manifestation of commencing sclerosis with which it is sometimes associated. Maurice describes this type as sclerogummata. The differential diagnosis between carcinoma of the liver and the larger gummata is often difficult. The syphiloma is smoother and not quite so nodular in feel, and is usually of a yellower color.

Primary carcinoma of the liver is rare; it is more rapid in its course, and the patient is usually sicker than with syphilis, and, as Cumston says, "Enlargement of the spleen favors

syphilis." Multiple gummata of moderate size may also closely resemble carcinoma in its secondary stage, while the smaller syphilides may at times resemble miliary tuberculosis.

Syphilis is sometimes mistaken for cirrhosis of the liver. In such cases hæmatemesis, dilated veins in the abdominal wall, ascites, and dyspepsia are less frequently seen than in cirrhosis. When ascites is due to cirrhosis the patient is thinner, while in syphilis the general nutrition may be fairly preserved. In cirrhosis, if the liver is enlarged, it is usually more symmetrical than in syphilis, for in the later condition there is usually an irregular enlargement. As the iodides are frequently given in cirrhosis, some of the reported cures of this disease may have been due to a mistaken diagnosis. In all three of these types the diagnosis may have to be settled by a course of antisyphilitic treatment or by the removal of a piece of the tumor for microscopical examination, as was done in two of the cases reported below.

*Symptoms.*—It is quite surprising how many of the fifteen cases of syphilis of the liver already operated upon and reported by Keene and Cullen give no previous history of syphilis, nor any of the ordinary evidences of tertiary syphilis aside from the liver condition itself. In most of the reported cases the statement is made that they have not had the ordinary primary or secondary symptoms of syphilis; that they have not had primary sores, skin disease, falling of the hair, chronic sore throat, rheumatism, and that there is no enlargement of the glands. It seems to me that there are two possible explanations,—the first, that there are so many extra-genital primary sores which are not recognized as syphilitic; and, second, that the cases giving the ordinary symptoms have been properly diagnosed and treated, thereby preventing the later liver symptoms; or, if a certain case has had the ordinary primary and secondary symptoms, the later tertiary liver troubles will be much more easily diagnosed and the proper treatment instituted, thereby avoiding, perhaps, the necessity of an exploratory operation.

Of the cases which have come to operation, many have

given only slight symptoms of any kind. The patients have looked well and have only suffered mild distress in the epigastric region; there has usually been a jaundice for several weeks with a temperature of about 100° F., loss of flesh, and some enlargement of the liver. In several with a distinct tumor which felt like an enlarged gall-bladder, and in a few with a small ascitic accumulation. Many of these cases have had colic, like biliary colic; and if associated with enlargement and tenderness in the gall-bladder region, it is not surprising that they have been mistaken for gall-bladder cases.

*Treatment.*—If syphilis of the liver is suspected, a course of antisyphilitic treatment, especially large doses of the iodides, should be given, and will cause a cure in a large proportion of cases. From fifteen to thirty grains of the iodides of potassium and sodium t. i. d. combined with mercurial inunctions, or, in acute cases, intramuscular injections of the mercurial salts. But, in spite of large doses of the iodides, some cases of large gummata will not disappear. Such cases are recently reported by Mr. R. Parks and Dr. Garrod.

This brings us to the question of the operation. Auschultz and Hans Kerr think that even after exploration, if syphilis of the liver be found, the wound should be closed and the patient be put upon antisyphilitic treatment. This position is undoubtedly correct in all cases except where large gummata are found, for these are the cases which persist in spite of treatment. My own experience, when viewed in the light of the reports made by Keene, Robeson, Mayo, and Freeman in removal of large tumors of the liver of various kinds, makes me feel that the surgery of the liver is just commencing, that it is a fruitful field, one that we have shunned on account of the fear of hæmorrhage; that many of the tumors of the liver which we have universally abandoned can be safely removed to-day.

Hunbald reports ninety-six cases of resection of the liver, being all of the cases reported in the literature that he could find, with a mortality of 26 per cent. This includes Keene's list with a mortality of 15 per cent., while Cullen, who has

tabulated all of the cases since Keene's reports finds seventeen with two deaths, or a mortality of 11.7 per cent. But to return to the surgical treatment of gummata: I find ten cases of either complete or partial removal of large gummata, including my own case, with two deaths, both of these deaths were treated by the elastic ligature method, making a mortality of 12.5 per cent.

The removal of gumma helps in the cure of any case because there is much less tissue to be absorbed. If antisyphilitic treatment was certain to absorb all gummata, then the risk of removal would not be justifiable. But as it will not always absorb large gumma, and as the diagnosis is not always certain from gross appearance of the growth, removal is justifiable.

Keene favors the removal of tumors with a red-hot cautery knife, tying the large vessels separately with catgut. Mayo reports one case successfully treated in this manner. The constriction of part of the liver with an elastic ligature behind hat-pins has been successful in a few cases, but is also responsible for some of the late deaths. Konsnietzoff's blunt needle with double catgut, as used by Mikulicz, is perhaps the best method of controlling the hæmorrhage after removing the tumor. Gauze tamponing of the raw surface, especially after the use of the cautery, is an additional precaution in preventing hæmorrhage.

CASE I.—A patient seen in consultation with Dr. Herbert Davis. This man was forty years of age, who denies syphilis, and has not had, nor does he give now, any signs of syphilitic infection. He had been suffering with indefinite pains through the right upper abdominal cavity, with a moderate enlargement of the liver, first noticed six weeks ago. He had been suffering with attacks of colic for the past three months, with some loss of flesh and strength. On exploration, December 12, 1903, I found an enlarged liver, its upper surface covered with white star-shaped patches, while its under surface presented several hard, white nodules from the size of a plum to a pea. One moderate sized nodule near the anterior surface was removed and the wound sutured with catgut, the end of a gauze drain being attached to

the liver. Two microscopical diagnoses were made, one for carcinoma and one for gumma. After exhibition of the iodides, the enlargement of the liver disappeared, and the man gained twenty pounds in three months. As he has remained perfectly well, now over two years since the operation, it is reasonable to conclude that the diagnosis of carcinoma was not correct.

CASE II.—Large gumma of the anterior border, operated upon four and a half years ago. Mrs. B., seen with Dr. Jeanette MacLaren in December, 1900; thirty years of age; mother of three healthy children, aged seven, six, and three, respectively. These children show no evidence of hereditary syphilis, but are not a very vigorous type. Five years before was treated by Dr. Schadle for some throat trouble; after operation, which I am here describing was performed, it was discovered that at this time she had a perforation of the soft palate, which quickly healed after a course of iodides. One year before I saw her, Dr. Charles Greene treated her for pulmonary tuberculosis. Tubercle bacilli were found in the sputum. Under treatment, her weight improved in three months from 107 to 120, and the tubercle bacilli disappeared from the sputum. Dr. MacLaren had treated her for chronic pelvic disease and general anæmia, which always promptly responded to local treatment and Blaud's pills. The abdominal growth was first noticed in August, 1900, which was not tender at any time. In October she became quite anæmic, although the blood was not changed; red corpuscles normal; no increase of white cells. Temperature was from 100° to 101° F.

Operation, December 6, 1900. A large white tumor on the anterior border of the left lobe, overlying the gall-bladder, the size of a man's fist, not pedunculated, extensive adhesions to the omentum. This tumor was removed, with at least one inch of normal liver substance, with a knife after an over and over catgut suture passed with a large, curved, round pointed needle constricting the same tissue more than once, when it showed a tendency to bleed. Iodoform gauze-drains were packed against the large raw surface left after removing the growth. This woman promptly recovered, and has remained perfectly well, now four and one-half years since the operation. She has had iodides since the operation on several occasions. Dr. Westbrook diagnosed gumma.

CASE III.—Mrs. L., seen with Dr. Sweeney. Patient is

thirty-six years of age; married sixteen years. Soon after marriage she had an attack of inflammation of the womb; was a patient of Dr. Sam Johnson, of Hudson, and was treated by him for several years at his sanitarium for chronic pelvic trouble and a chronic cough. Her first child was born dead, but was perfect and not apparently diseased. Later she was quite well for seven years. The second child was born six years ago, and has always been a healthy child. Present trouble commenced two years ago with pain in the region of the stomach and occasional attacks of vomiting and chronic soreness in the epigastric region. She has never had any symptoms suggestive of syphilis. Five weeks ago she first noticed a lump just above the umbilicus, continuous with the edge of the liver. Exploration on April 7, 1905, demonstrated a uniformly enlarged liver, covered with hard, white, irregular nodules, each about the size of a silver half-dollar. Fully thirty such nodules were seen and felt in both lobes, equally distributed in both the upper and under surface of the liver. No larger mass was found in the abdominal cavity. A section of one of these lobes was removed and the cut edges were united with catgut sutures. There was a very slight accumulation of ascitic fluid. This woman recovered promptly, and left the hospital improved under iodides, but with some ascitic fluid in the abdomen. She has gained fifteen pounds; ascitic fluid had decreased.

Dr. Hines and Dr. Rothrock report that the growth is a gumma.